

## Energy, Earth, and Human Systems Modeling for an Oxyfuels Transition Strategy

DOE Fossil Energy/Office of Science
Carbon Capture 2020 Workshop — October 5-6, 2009
University of Maryland

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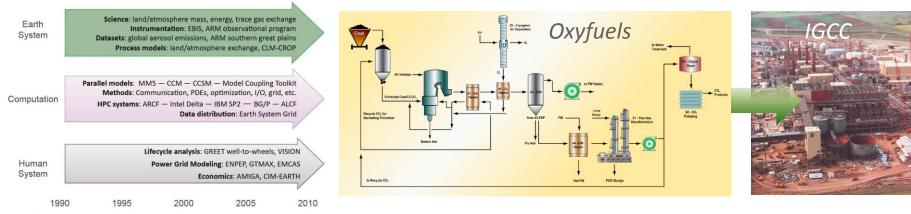
Collaboration with Dr. Donald A. Hanson and Dr. John C. Molburg



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- CO<sub>2</sub> recovery from pulverized coal-fired power plants retrofitted for flue gas recirculation (Oxyfuel) and its application across the existing fleet linked ASPEN® engineering assessment to the AMIGA energy systems CGE economic model.
- The transitional strategy retrofitted Oxyfuels and then converted the power station site over to IGCC. This was accomplished by investigating the sensitivity to: Capacity and dispatch; Policy timing; Price of electricity and CO<sub>2</sub>; Retrofit timing
- There are marked benefits with the implementation of Oxyfuels.
- A full assessment should link the DOE Office of Science on the integrated treatment of fossil energy, earth, and human systems at the regional scale.



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